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Standing Order in the Management of Patients: The perception of Community Extension Workers in Ekiti South Senatorial District of Ekiti State, Nigeria

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Abstract

Standing order is the instrument with which the community health extension workers (CHEW) were trained and are expected to use when attending to patients at primary health care facilities. The purpose of this study is to investigate the perceptions of the CHEWs on the standing order. The research was prospective and cross-sectional in nature and used a self-applied structured questionnaire distributed to eligible CHEWs between the months of March and April 2022. The age of the respondents ranged between 23 and 58 years, with a mean age of 42.5 years and a standard deviation of 6.03. 81.1% responded that standing order should be used by CHEWs at all times, while 86.8% responded that all CHEWs should use it when attending to patients. The perceptions of CHEWs on acceptability and credibility of standing order were high, but that of its usefulness was low.

Keywords: *Acceptability, Credibility, Usefulness.*

Introduction

Standing order (SO) is a written protocol for the classification of disease conditions and subsequent identification of relevant treatments or procedures for such disease conditions and application of such for its treatment in the absence of a doctor by an authorised non-clinician health worker [1, 2]. Standing order is the basic tool being used for the training of community health extension workers, and it is the tool they are expected to use in the management of patients. The standing order makes the community health extension workers (CHEWs) function effectively in the absence of a medical doctor. The use of SO by the CHEWs is expected to enhance the accuracy of "diagnosis" and the provision of good treatment. The concept of standardization is not really new, as it was reported to have been used in the production of uniform products during the industrial revolution [3]. Its objective is to ensure excellence in healthcare service delivery and minimize errors and distortion in routine activities [4]. A standard serves as a basis or norm for evaluation and is related to the expected outcome [3]. It is an instrument required to measure performance and bridge the gap between scientific evidence and practice [5].

The standing order is written by the National Primary Health Care Development Agency, and it is the tool with which the community health extension workers are trained and are expected to use while attending to patients. It is similar to clinical practice guidelines, which is a systematically developed statements to assist practitioners and patients in choosing appropriate care for a specific health condition [6]. Standards are established guidelines aimed at controlling and maintaining continuous improvement of quality of care [3]. If standing order is strictly adhered to by the community health extension workers, it will lead to a high quality of care and better health outcomes with

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improved health indices for the country. The fundamental principle of excellent patient care revolves around patient safety and is central to continuous healthcare quality management [7]. Patients' safety in diagnosis uncertainty and management of poly-pharmacy is an observed challenge in primary healthcare settings [8]. The main objective of the national standing order is to empower CHEWs and enable them to provide high-quality healthcare services and a uniform standard of care to patients [9]. The standing order also provides legal backing and protection to CHEWs in the course of their practice.

The use of protocol or guidelines in the management of the patient is not peculiar to the CHEWs and has been found to improve the quality of care. The use of National protocol and WHO guidelines in the management of malaria has been found not only to be effective but also to remove gross over-diagnosis of malaria and the subsequent wastage of antimalarial drugs [10]. However, to achieve the set objectives of the standing order, CHEWs must adhere strictly to the use of the standing order while attending to patients [1].

The utilization of standing order by community health extension workers is dependent on their perception. Perception is the identification, organization, and interpretation of information with the objective of using such to make a decision for action. It has been observed to be a strong determinant of the utilization of interventions in the health care delivery system. Availability and awareness partially predict the utilization of interventions as individuals may choose not to use the intervention [11]. Evidence suggests that people's perceptions play a crucial role in the utilization of intervention [12]. Irrespective of demonstrated effectiveness or usefulness, people are unlikely to use an intervention that they view unfavourable [12].

Despite the proven benefits of donning PPE, compliance was fraught with discomfort and individual perception [13]. Participants' perception of intervention affects their enlistment, continuity, and attrition in the implementation [12]. People's perceptions and judgement are often influenced by factors such as culture, tradition, courtesy, and perceived competence [11]. Other factors like peer pressure, self-respect, environment, need, knowledge, risk, and experience also influence perception. Even in issues related to personal protection and safety, perception is a strong indicator of behaviour. In a study by Girma et al on-risk perception and precautionary health behaviour in Ethiopia, risk perception was observed to have a positive relation with behavioural health response [14]. Risk perception influences the judgement and evaluation of threats and can have a negative effect on compliance [15]. Compliance with donning of PPE was found to be dependent on the perceived necessity to wear it [13].

In Nigeria, like other developing countries where patients do not really know what health workers should do for them, assessment of certain dimensions of care is best done by health workers [16]. There are scanty research papers on standing order and its utilization among community health extension workers in Nigeria. This research, therefore, seeks to investigate the perception of community health extension workers on standing order.

Methods

The study was conducted in the Ekiti south senatorial district of Ekiti state, Nigeria. The senatorial district is made up of six local government areas of Ekiti East, Gbonyin, Ise/Orun, Emure, Ikere, and Ekiti Southwest, with an estimated total population of one million, forty-two thousand and seventy-seven (1,420077) using projected population census of the year 2006 and covering two thousand and fifty-four square kilometers. The headquarters of these local government areas are Omuo Ekiti, Ode Ekiti, Ise Ekiti, Emure Ekiti, Ikere Ekiti, and Ilawe Ekiti.

Study Design

The study was prospective and cross-sectional in design, and it used structured questionnaires distributed by trained research assistants to eligible community health extension workers.

Sampling

Eligible community health extension workers were sampled from the six local governments using proportionate, stratified, and simple sample methods. The lists of all community health extension workers per health facility in all six local governments were given to the respective research assistants.

Inclusion Criteria

Community health extension worker working in Ekiti South senatorial district and has been working for at least five years.

Ethical Consideration

This research was approved by Ekiti Ministry of health, and the body was saddled with such responsibility. All respondents also gave their written consent.

Data Collection and Analysis

A self-administered structured questionnaire was used for the study. The questionnaire was pre-tested in two adjoining local governments of Ado and Ikole. Errors and ambiguous questions were corrected before the commencement of data collection. Questionnaires were distributed by research assistants to participants and collected between February and April 2022. The collected data were checked and cleaned as appropriate for accuracy and completeness. The data was analysed using SPSS version 22.

Results and Discussion

A total number of 265 questionnaires were validly returned, but there were missing values across the variables. The age of the respondents ranged between 23 years and 58 years, with a mean age of 42.5 years and a standard deviation of 6.03 and 4 missing values representing 1.4%, with 88.1% of the respondents below the age of 50 years. The least age of 23 years was a bit surprising as no recruitment of health workers had been done within the last 10 years in the primary health care service except for that of medical officers. It was a surprise because the mandatory least age for recruitment is 18 years, and it was therefore expected that the least age in years should be about 28 years. However, the least age of 23 years was possible if such officers were converted from other non-medical cadres. That 88.1% of the respondents were below the age of 60 years, and the retiring age of health workers generally put at 60 years; indicates that most respondents still have more than ten years in service.

The distribution of respondents by sex was as follows, 35 (13.2%) were males, while 228 (86%) were females, with 2 (0.8%) missing values. That most respondents were females were not unexpected as more women than men generally work at the primary health care level. Most of the respondents, 250 (94.3%), were married, 8 (3%) were single, 1(0.4) were divorced, and six (2.3%) were missing values.

Table 1. Summary of Age of Respondents

	Number	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
Age of respondents	261	23.00	58.00	42.4904	6.03363
Valid Number	261	-	-	-	-

Table 2. Characteristics of Respondents by Sex

Sex	Frequency	Percent	Valid Percent	Cumulative Percent
Male	35	13.2	13.3	13.3
Female	228	86.0	86.7	100.0
Total	263	99.2	100.0	-
Missing	2	.8	-	-
Total	265	100.0	-	-

The majority, 165 (62.3%), had an Ordinary National Diploma (OND) in community health. 10 (6%) had Pre- National Diploma (pre-ND), 29 (10.9%) had Higher National Diploma (HND), 52 (19.6%) had Bachelor of Science (BSC) while 2 (0.8%) had Master of Science (MSC) with 1 (0.4%) missing. Most of the respondents, 200 (75.5%), were senior community health extension workers (SCHEW), 46 (17.4%) were community health officers (CHO) and 19 (7.2%) were junior community health extension workers (JCHEW).

Credibility, acceptability, usefulness, and outcome expectation are different terminologies that have been used to reflect perceptions of health interventions in literature, and these terminologies were often used interchangeably [12]. Perception in this study reflected on acceptability, credibility, and perceived usefulness/ outcome expectation of the standing order by the community health extension workers.

Acceptability

Acceptability is a vital consideration in the design, development, and implementation of health interventions [17]. Acceptability of a service has implications on the utilization of such service [18]. Evaluation of the perception of CHEWs on the use of SO is therefore important because of its critical role in the delivery of health care services at the PHC level in Nigeria. Perception of the acceptability of SO by CHEWs was evaluated using three variables shown in tables 3 to 5.

Most of the respondents, 215 (81.1%), defined SO as guidelines to be used by CHEWs to assess and treat patients at all times. 26 (9.8%) defined it as guidelines to be used when CHEWs don't know what to do, 3 (1.1%) defined it as guidelines to be used when CHEWs encounter difficulty, while 18 (6.8%) as guidelines to be used by all Primary health care workers with 3 (1.1%) missing value. On health workers that should use SO when attending to the patient, 230 (86.8%), 23 (8.7%), 10 (3.8%), and 1 (0.4%) felt all CHEWs including CHO, all PHC workers, JCHEWs, and SCHEWs only and nurses and doctors respectively should use SO and 1 (0.4%) missing value.

Table 3. Distribution of Respondents by Definition of Standing Orders

Definition	Frequency	Percent	Valid percent	Cumm Percent
Guidelines to be used by CHEWs when you don't know what to do	26	9.8	9.9	9.9
Guidelines to be used by CHEWs at all times	215	81.1	82.1	92.0
Guideline to be used by CHEWs when encounter problem	3	1.1	1.1	93.1
Guidelines to be used by all PHC workers	18	6.8	6.9	100.0
Total	262	98.9	100.0	-

Missing	3	1.1	-	-
Total	265	100.0	-	-

Table 4. Response on who Should use Standing Orders

Who should use SO	Frequency	Percent	Valid percent	Cumm Percent
All CHEWs including CHO	230	86.8	87.1	87.1
JCHEW and SCHEW only	10	3.8	3.8	90.9
All PHC workers	23	8.7	8.7	99.6
Nurses and doctors	1	.4	.4	100.0
Total	264	99.6	100.0	-
Missing	1	.4	-	-
Total	265	100.0	-	-

Responding at what level of care is SO comprehensive enough to be used for the management of patients, 213 (80.4%) responded that it was comprehensive enough at the PHC level, while 51 (19.2%) and 1 (0.4%) responded that it was at all levels of care and tertiary level respectively.

Table 5. Response on where SO is Comprehensive Enough for Use

Level of care	Frequency	Percent	Valid Percent	Cumulative Percent
PHC level	213	80.4	80.4	80.4
Tertiary level	1	.4	.4	80.8
All levels of care	51	19.2	19.2	100.0
Total	265	100.0	100.0	-

Acceptability of an intervention refers to the judgment by the implementers or expected beneficiaries that such intervention can address the targeted health problem [12]. In addition, it should be socially and culturally acceptable for such intervention to produce desired results. The standing order is specifically designed to be used by CHEWs at the PHC (Primary Health Care) level to solve the problem of the dearth of skilled health workers, especially doctors at PHC facilities. Abimbola et al. observed a dearth of skilled health workers at PHC facilities, especially in rural areas [19, 20]. More than 80% of the respondents opined that SO is compressive enough to be used at the PHC level and should be used by all CHEWs, including CHO, when attending to patients in the facilities.

Only about 10% of the respondents opined that SO should be used by CHEWs only when they encounter a problem or when they do not know what to do. In addition, less than 10% felt it should be used by other health workers even though these other health workers were not trained with SO and were not expected to use it. If the acceptability of an intervention is low, it might not be delivered as intended, with the consequent negative effect on the expected outcome. In general, the response shows the acceptability of SO as an instrument to be used by CHEWs when attending to patients at the primary health care level was high. This is an indication of shared acceptability and is expected to have a positive effect on the utilization of SO by CHEWs.

Credibility

Credibility is the expression of the respondents' confidence in the capability of the intervention to address the health problem it intends to solve. It is a measure of the level of conviction of an individual about the logic of the intervention [21]. In the evaluation of the perception on the credibility of SO, three

important aspects of care were examined. These included the capability for history taking and physical examination, provision of uniform and standard care, and provision of relevant medications. Using Likert scale, the results of the responses were as shown in table 6 below. There were 264, 262, and 262 valid responses for taking history and physical examination, maintaining high standard of care and uniform treatment, and containing all necessary drugs, respectively, giving a total of 789 valid responses.

Table 6. Responses on Credibility of Standing Order

Variables	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**	**Total**
SO provides the framework for taking history and physical examination	12	2	1	122	127	264
SO helps to maintain a high standard of care and uniform treatment	12	11	1	121	118	263
SO contains all necessary drugs for common diseases at the PHC level	16	27	8	120	91	262
Total	**40**	**40**	**10**	**363**	**336**	**789**

249 (94.3%) respondents agreed standing orders have the capacity to provide a platform for history taking and physical examination, while only 14 (5.3%) disagreed, and 1 (0.4%) was neutral. The importance of history, physical examination, and laboratory investigation can never be over emphasized in the diagnosis and management of patients. Errors in diagnosis have been observed to represent high-risk area in primary health care services [22]. History taking is an important aspect of the complex diagnosis process that culminates in the identification of specific treatment [23]. Physical examination is more than a tool for making the diagnosis as it also provides reassurance for the patients and satisfaction for the clinicians [24]. Poor physical examination was opined to threaten patient safety as it can lead to misdiagnoses and delay in appropriate treatment [25]. Weight measurement: a form of physical examination is crucial in children as it is used for drug estimation [26]. 239 (90.9%) respondents also agreed SO helps to maintain a high standard of care and uniformity of treatment, while 23 (8.7%) disagreed, and 1 (0.4%) was neutral. Out of the 262 valid respondents, 211 (80.5%) agreed that SO contains all necessary drugs at the primary healthcare level while 43 (16.4%) disagreed, and 8 (3.1%) were neutral. Overall, 699 (88.6%) respondents agreed that the SO was credible to be used at the PHC level, while 80 (10.1%) disagreed with 10 (1.3%) neutral. Credibility is an important clinical practice [20], without which acceptability will be poor. That more than 85% of the respondents agreed on the credibility of SO seems to give credence to the credibility of SO at the primary health care level. However, as good as 88% agreement was, there is a need for improvement of its credibility among the CHEWs to enhance utilization.

Perceived Usefulness/Outcome expectation

Perceived usefulness is the extent to which respondents believe the intervention will enhance job performance, and Intention to utilize an intervention has been found to be dependent on its perceived usefulness [27]. Acceptability of an intervention or technology is closely associated with expected usefulness, and this predicts utilization of such intervention. [17] opined that the acceptability

of an intervention is dependent on its perceived usefulness. Physicians' perception of the usefulness of intervention was observed to have an effect on its utilization [5]. In a study by Prakash et al., compliance with the use of personal protective equipment (PPE) was found to be very high because of the proven usefulness of PPE [13]. Tables 7 and 8 below illustrate respondents' perceptions on the usefulness of SO. 257 ((97%) of the respondents reported that SO is used for the management of all patients irrespective of age or gender. However, 2 (0.8%), 1 (0.4%), and 3 (1.1%) respectively reported that SO is used for the management of only children, only women, and women and children only with 2 (0.8%) missing values. 139 (90.5%) and 21 (8%) respondents respectively agreed and disagreed that SO provides legal protection, with 4 (1.5%) neutral. One of the benefits of using SO is that it provides legal protection to CHEWs in the course of providing health care services [9]. The vast majority of CHEWs knew that SO provides legal protection is expected to enhance the utilization of SO. On the prevention of many unnecessary prescriptions, 179 (68.6%) agreed that SO is useful, while 74 (28.4%) disagreed with 8 (3. %) neutral. Many unnecessary prescriptions of drugs lead to poly-pharmacy and have both health and cost consequences. Poly-pharmacy leads to increase drug expenditure in the hospital, shortage of drugs, and consequences for the patients [28]. More so, the irrational use of drugs has economic and health implications for a country; it has negative effects on mortality and morbidity ratios of the country and unnecessarily increases the cost of health care services [29, 30]. Laboratory tests assist in the making of accurate diagnoses and better management of the majority of common diseases [3, 1]. However, inefficient requests for laboratory tests can be counterproductive. 97 (37.3%) disagreed that SO prevents requests for unnecessary and expensive laboratory investigation, but 159 (61.2%) agreed and a neutral value of 4 (1.5%). As important as laboratory tests are, unnecessary and expensive laboratory tests increase the cost of health care services and may limit access. Studies have shown that requests for laboratory investigations were excessive, leading to inefficient laboratory service utilization [32, 33]. In an attempt to reduce the cost of laboratory instigations, pressure has been put on laboratory medicine to reduce inefficiency in laboratory requests without compromising on the quality of care [34].

Table 7. Categories of Clients that SO should be used for

SO for Management of	Frequency	Percent	Valid Percent	Cumulative Percent
Children only	2	.8	.8	.8
Women only	1	.4	.4	1.1
All patients	257	97.0	97.7	98.9
Women and children only	3	1.1	1.1	100.0
Total	263	99.2	100.0	-
Missing	2	.8	-	-
Total	265	100.0	-	-

Table 8. Responses on the Usefulness of SO

Variables	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Total
SO provides legal protection	15	6	4	119	120	264
SO prevents many unnecessary prescriptions	28	46	8	108	71	261

SO prevents unnecessary and expensive laboratory investigation	26	71	4	106	53	260
Total	69	123	16	333	244	785

From the Likert results in table 8, 577 (73.5%) agreed that SO is useful, while 192 (24.5%) disagreed. This is a measure of its effectiveness which simply means doing things in the best available and measurable right way [35]. The overall percent score for agreement on the usefulness of 73.5% using the usefulness of SO on legal protection, prevention of unnecessary prescription of many and expensive drugs, and request for unnecessary and expensive laboratory investigation was lower than that of credibility which was 88.6%. In addition, all scores in acceptability were above 80%, making the perception on usefulness the least. Although 97% of respondents felt SO was to be used for all categories of patients and 90.5% of those that agreed that SO provides legal protection were seemingly high enough; the seemingly low perception on its usefulness in the prevention of prescription of many and unnecessary drugs and laboratory was a big negative that required improvement. This becomes more imperative as the use of SO is expected to prevent poly-pharmacy, promote efficient laboratory requests and reduce the cost of health care services.

Conclusion

Perceptions of health workers is an important issue that should be taken into consideration when developing health interventions because its effects on the success or otherwise of such intervention have been established. The perceptions of community health extension workers on the credibility and acceptability of standing order as an instrument to be used while attending to a patient at the primary health level is relatively higher in comparison with their perception of its usefulness. The seemingly low perceptions of health workers on the usefulness of the standing order in the prevention of prescriptions of many expensive drugs and requests for unnecessary and expensive laboratory tests is a critical issue that requires concerted effort to tackle. The cost of health care services is on the increase mainly as a result of the ever-increasing costs of medicines and laboratory tests. A thorough and comprehensive review of the standing order to improve its capability to reduce drugs per prescription, reduce prescriptions of expensive drugs, and unnecessary requests for laboratory tests will not only increase its acceptability but also reduce the cost of health care services and improve access to health care via removal of an unnecessary financial barrier.

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Conflicting Interest

The Author declared no conflicting interest.

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